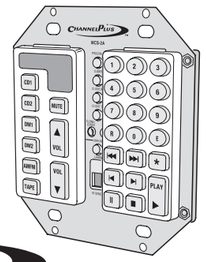
MCS-2A

Programmable Zone Controller

For Use with the
Model MDS-6A Music Distribution System

Installation & Operation Instructions



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1. PRODUCT DESCRIPTION

The MCS-2A Zone Controller is designed as an in-room control for the MDS-6A Music Distribution System. The MDS-6A distributes amplified audio from up to six sources to up to six speaker zones. In a typical installation, an MCS-2A Zone Controller would be installed in each listening room or location to control the speakers in that zone. The MCS-2A mounts in a standard double-gang electrical box and is covered by a standard Decora™ wall plate (neither item is included with the controller).

The MCS-2A Zone Controller's source keys are used to select which audio source device (CD, TUNER, TAPE, DVD, DBS, TV, etc.) will be played from its specific speaker zone. The speaker's volume can be adjusted, or muted, using the keys on the Zone Controller. Function keys for PLAY, STOP, PAUSE, SKIP FORWARD, SKIP BACKWARD, NEXT TRACK, and PREVIOUS TRACK are provided to control the source device action. Numeric keys allow direct access to numeric selection functions of the source device. Custom "macros" can be programmed into the MCS-2A to perform multiple commands for a source device by simply pressing ★ then a single key.

Pre-programmed infrared remote control codes for over 500 types of audio sources can be selected for each audio source key. In addition, infrared remote control codes can be "learned" into the Zone Controller directly from the source device's handheld remote control and assigned to almost any key on the controller. To make system setup easy, once the infrared codes are programmed into one Zone Controller, the same codes can easily be sent to other Zone Controllers in the system using the "clone" feature. Any infrared code send to the MCS-2A from a handheld remote will be repeated to all source devices through the MDS-6A.

Two special features are available for each Zone Controller. The "whole-house-music" feature will play a selected audio source from all of the system's speaker zones. The "do-not-disturb" feature prevents a speaker zone from responding to "whole-house-music" commands from other Zone Controllers and mutes any system wide pages to that speaker zone.

The MCS-2A keys can light in three colors (green, red, & yellow) to show the status of the speaker zone. The optional key backlighting (selectable with dipswitch #1) lights all of the keys with a pleasant green glow. The audio source selection keys will light red to indicate the selected audio source. When "whole-house-music" is selected the designated audio source key lights yellow. The MUTE key normally lights green, then lights red when the speaker zone is muted. The MUTE key blinks yellow when "do-not-disturb" feature is active for the speaker zone and lights yellow when "do-not-disturb" is active and the speaker zone is muted.

2. COMPONENT LOCATIONS

INFRARED RECEIVER WINDOW
- Receives IR from handheld remotes
- IR is passed through to MDS-6A

AUDIO SOURCE BUTTONS
- Press to select audio source
- Selected source button lights red
- Push for 5 seconds to select "Whole-house-music" feature

MUTE BUTTON
- Press to mute the local speakers
- Lights red when source is muted
- Lights yellow during "Do-not-disturb"
- Push for 5 seconds to switch MDS-6A power off

VOLUME BUTTONS
- Press VOL-UP for louder local speakers
- Press VOL-DOWN for quieter local speakers
- Push with VOL-DOWN to select "Do-not-disturb" feature

CLONE/LEARN INDICATOR
- Lights while unit is in clone receive
- Lights during IR code programming

OK INDICATOR
- Lights when clone data is received OK
- Flashes when IR code is learned from a remote

PROGRAM BUTTON
- Puts unit in Program Mode
- Used for entering device IR codes

CLEAR BUTTON
- Press CLEAR then a source button to erase source device IR codes & macros
- Push for 5 seconds to erase all device IR codes & macros

CLONE RX BUTTON
- Press to set MCS-2A into clone receive mode for 10 minutes
- Press CLONE TX on a programmed MCS-2A to send IR codes & macros to all units in clone receive mode

CLONE TX BUTTON
- Press CLONE TX on a programmed MCS-2A to send IR codes & macros to all units in clone receive mode

NUMERIC KEYPAD
- For entering numeric functions for source devices

"R" BUTTON
- Press to send "last channel" command
- Press to send "repeat" command for some some source devices

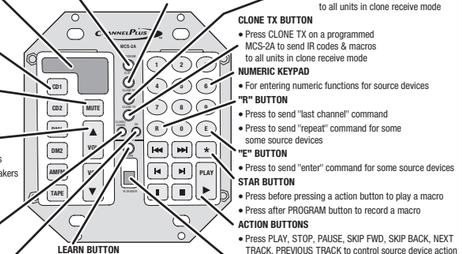
"E" BUTTON
- Press to send "enter" command for some source devices

STAR BUTTON
- Press before pressing a action button to play a macro
- Press after PROGRAM button to record a macro

ACTION BUTTONS
- Press PLAY, STOP, PAUSE, SKIP FWD, SKIP BACK, NEXT TRACK, PREVIOUS TRACK to control source device action

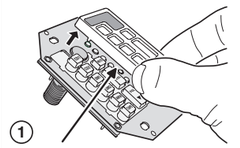
IR SENSOR
- Receives IR codes from handheld remotes during Learn Mode

LEARN BUTTON
- Press to put unit in Learn Mode
- Press again to exit Learn Mode
- Used for programming macros

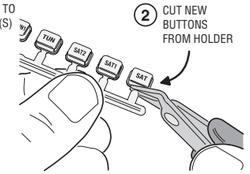


3. CUSTOMIZE THE SOURCE BUTTONS

THE SOURCE BUTTONS AND BEZELS CAN BE CHANGED TO SUIT THE INSTALLATION

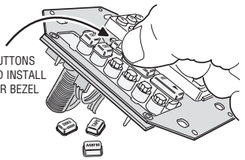


1. SQUEEZE BEZEL SIDES TO REMOVE INNER BEZEL(S)

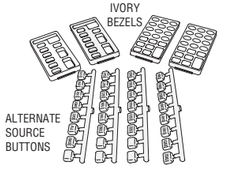


2. CUT NEW BUTTONS FROM HOLDER

3. PLACE NEW BUTTONS ON POSTS AND INSTALL CHOSEN COLOR BEZEL



WHITE & IVORY BEZELS

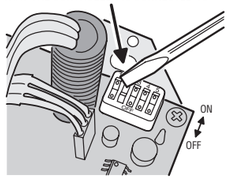


ALTERNATE SOURCE BUTTONS

4. SET THE DIPSWITCH

SET THE DIPSWITCH TO ASSIGN THE CONTROLLER'S SPEAKER ZONE NUMBER AND KEYPAD BACKLIGHT OPTION

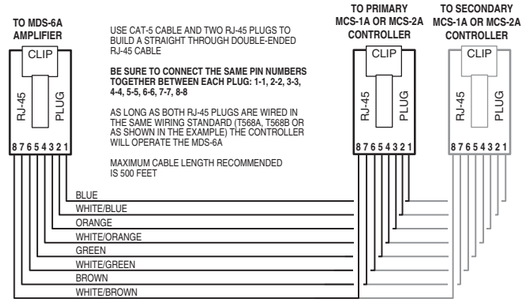
THE MCS-2A CONTROLLER'S SPEAKER ZONE NUMBER MUST MATCH THE NUMBER OF THE MDS-6A ZONE THAT THE CONTROLLER IS CONNECTED TO



DIPSWITCH SETTINGS					
1	2	3	4	5	ZONE
	ON	ON	ON	OFF	ZONE 1
	OFF	ON	ON	OFF	ZONE 2
	ON	OFF	ON	OFF	ZONE 3
	OFF	OFF	ON	OFF	ZONE 4
	ON	ON	OFF	OFF	ZONE 5
	OFF	ON	OFF	OFF	ZONE 6
→ #1 **ON** TURNS KEYPAD BACKLIGHT OFF					
→ #1 **OFF** TURNS KEYPAD BACKLIGHT ON					

WHEN THE CONTROLLER IS ASSIGNED TO A SPEAKER ZONE USING THE DIPSWITCHES AND THE CONTROLLER IS PROPERLY WIRED AND PLUGGED INTO THE CORRESPONDING KEYPAD ZONE, A GREEN LIGHT WILL APPEAR ON THE FRONT OF THE MDS-6A WHEN A SOURCE IS SELECTED INDICATING THAT THE CONTROLLER HAS BEEN PROGRAMMED FOR THAT SPEAKER ZONE. WHEN THERE ARE TWO CONTROLLERS PER SPEAKER ZONE, BOTH CONTROLLERS WILL NEED TO HAVE THE SAME DIPSWITCH SETTINGS FOR THAT SPEAKER ZONE.
NOTE: DIPSWITCH #5 IS NOT USED.

5. BUILD AND CONNECT THE CABLE



USE CAT-5 CABLE AND TWO RJ-45 PLUGS TO BUILD A STRAIGHT THROUGH DOUBLE-ENDED RJ-45 CABLE

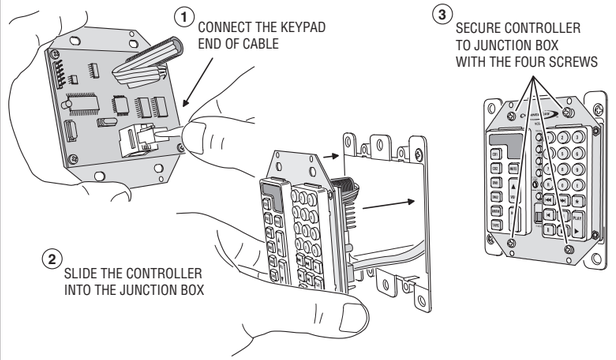
BE SURE TO CONNECT THE SAME PIN NUMBERS TOGETHER BETWEEN EACH PLUG: 1-1, 2-2, 3-3, 4-4, 5-5, 6-6, 7-7, 8-8

AS LONG AS BOTH RJ-45 PLUGS ARE WIRED IN THE SAME WIRING STANDARD (T568A, T568B OR AS SHOWN IN THE EXAMPLE) THE CONTROLLER WILL OPERATE THE MDS-6A

MAXIMUM CABLE LENGTH RECOMMENDED IS 500 FEET

NOTE: UP TO TWO MCS-1A OR MCS-2A CONTROLLERS CAN BE CONNECTED IN PARALLEL TO THE SAME AMPLIFIER ZONE (WIRE ANOTHER CONTROLLER PLUG TO THE SAME CABLE). WHEN ADDING A SECOND CONTROLLER PER SPEAKER ZONE, FOLLOW THE SAME COLOR CODED CONNECTION FOR THE SECOND CONTROLLER.

6. INSTALL THE CONTROLLER INTO A DOUBLE-GANG JUNCTION BOX



1. CONNECT THE KEYPAD END OF CABLE
2. SLIDE THE CONTROLLER INTO THE JUNCTION BOX
3. SECURE CONTROLLER TO JUNCTION BOX WITH THE FOUR SCREWS

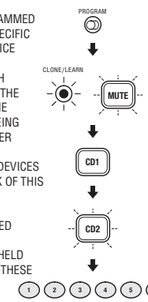
7. ENTERING IR CODES FROM THE DEVICE CODE TABLE

EACH SOURCE KEY SHOULD BE PROGRAMMED WITH A CODE NUMBER TO MATCH A SPECIFIC MANUFACTURER'S AUDIO SOURCE DEVICE

THE CODE NUMBER DESIGNATES WHICH INFRARED CODES WILL BE SENT FROM THE MDS-6A INFRARED EMITTERS WHEN THE SELECTED AUDIO SOURCE DEVICE IS BEING OPERATED FROM THE ZONE CONTROLLER

INFRARED CODE NUMBERS FOR MOST DEVICES ARE LISTED IN THE TABLE ON THE BACK OF THIS INSTRUCTION SHEET

IF A DEVICE IS NOT LISTED, ITS INFRARED CODES CAN BE LEARNED BY THE ZONE CONTROLLER DIRECTLY FROM A HANDHELD REMOTE CONTROL (SEE SECTION #8 IN THESE INSTRUCTIONS)



1. PRESS THE PROGRAM BUTTON
2. THE CLONE/LEARN INDICATOR LIGHTS RED & THE MUTE BUTTON BLINKS RED/GREEN
3. PRESS A SOURCE BUTTON **WITHIN 10 SECONDS** (THE CONTROLLER WILL EXIT PROGRAM MODE IF A SOURCE BUTTON IS NOT PRESSED IN 10 SECONDS)
4. THE SELECTED SOURCE BUTTON FLASHES RED
5. ENTER THE SIX-DIGIT CODE FOR THE DEVICE FROM THE CODE TABLE ON THE BACK OF THESE INSTRUCTIONS (PRESS THE CLEAR BUTTON IF YOU PRESS A WRONG DIGIT AND START OVER)
6. GO BACK TO STEP #1 AND REPEAT FOR EACH SOURCE BUTTON

8. LEARNING IR CODES FROM HANDHELD REMOTES

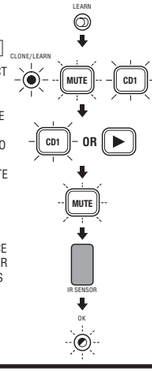
THE FOLLOWING BUTTONS CAN BE CUSTOM PROGRAMMED FOR EACH SOURCE BUTTON

0-9 ► ■ II ⏮ ⏭ ⏮⏮ ⏭⏭ R E

FOLLOW THE STEPS TO THE RIGHT TO SELECT A SOURCE BUTTON, THEN CHOOSE A PROGRAMMABLE BUTTON TO LEARN THE INFRARED CODE FROM A HANDHELD REMOTE

NOTE: WHEN USING A HANDHELD REMOTE TO TEACH INFRARED COMMANDS TO THE CONTROLLER, POINT THE HANDHELD REMOTE AT THE CONTROLLER'S IR SENSOR WINDOW BELOW THE LEARN BUTTON FROM ABOUT 2" AWAY OR CLOSER

IMPORTANT: AVOID INFRARED INTERFERENCE (COMPACT FLUORESCENT LIGHTS AND OTHER INFRARED SOURCES) WHEN SENDING CODES TO THE CONTROLLER. INTERFERENCE WILL MAKE IT DIFFICULT TO LEARN THE PROPER CODE. **NOTE: A MAXIMUM OF 25 INFRARED CODES CAN BE LEARNED**



1. PRESS THE SOURCE BUTTON YOU WANT TO ASSOCIATE THE IR CODES WITH
2. PRESS THE LEARN BUTTON
3. THE CLONE/LEARN INDICATOR LIGHTS RED, THE MUTE BUTTON FLASHES RED & GREEN, THE SELECTED SOURCE BUTTON LIGHTS YELLOW
4. PRESS A DIFFERENT SOURCE BUTTON OR JUST THE PROGRAMMABLE BUTTON **WITHIN 10 SECONDS** (THE CONTROLLER WILL EXIT LEARN MODE IF A BUTTON IS NOT PRESSED IN 10 SECONDS)
5. THE MUTE BUTTON FLASHES GREEN
6. SEND THE INFRARED CODE FROM THE HANDHELD REMOTE **WITHIN 10 SECONDS** TO TEACH THE SELECTED BUTTON ON THE CONTROLLER
7. IF THE CODE IS ACCEPTED, THE OK INDICATOR WILL FLASH GREEN
8. GO BACK TO STEP #3 AND REPEAT FOR ANY ADDITIONAL BUTTONS (PRESS LEARN BUTTON AT ANY TIME TO EXIT LEARN MODE)

9. PROGRAMMING RECORDABLE MACROS

PLAYING A RECORDED MACRO CAUSES THE CONTROLLER TO AUTOMATICALLY PERFORM A SEQUENCE OF UP TO 10 BUTTONS

A MACRO IS PLAYED BY PRESSING THE STAR KEY FOLLOWED BY THE SPECIFIC KEY THAT THE RECORDED MACRO IS ASSIGNED TO

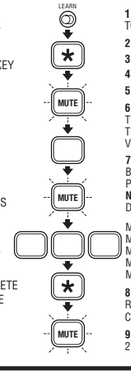
EACH SOURCE BUTTON AND THE FOLLOWING ACTION BUTTONS CAN BE ASSIGNED TO PLAY RECORDED MACROS

0-9 ► ■ II ⏮ ⏭ ⏮⏮ ⏭⏭ R E

THE BUTTONS AVAILABLE TO RECORD INTO MACROS CAN BE ANY OF THE SOURCE BUTTONS AND THE FOLLOWING ACTION BUTTONS

0-9 ► ■ II ⏮ ⏭ ⏮⏮ ⏭⏭

NOTE: IF A SOURCE DEVICE HAS A TIME DELAY BETWEEN THE TIME IT RECEIVES ANY I/R COMMAND AND THE TIME IT TAKES TO COMPLETE THAT COMMAND, INSERT A TIME DELAY IN THE MACRO AS SHOWN IN #7



1. PRESS THE SOURCE BUTTON YOU WANT TO ASSOCIATE THE IR CODES WITH
2. PRESS THE LEARN BUTTON
3. THE MUTE BUTTON BLINKS RED & GREEN
4. PRESS THE STAR BUTTON
5. THE MUTE BUTTON FLASHES GREEN
6. **WITHIN 10 SECONDS**, PRESS THE BUTTON THAT WILL BECOME THE BUTTON TO PLAY THE MACRO BEING RECORDED (MUST BE A VALID BUTTON)
7. RECORD THE MACRO BY PRESSING UP TO 10 BUTTONS IN THE ORDER THE MACRO WILL BE PLAYED (MUST BE VALID BUTTONS)
   NOTE: PRESS MUTE THEN A DIGIT TO INSERT TIME DELAYS BETWEEN PLAYED MACRO BUTTONS

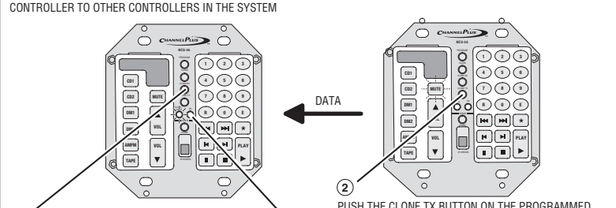
MUTE + 0 = 1/2 SECOND
MUTE + 1 = 1 SECOND
MUTE + 2 = 2 SECONDS
MUTE + 3 = 4 SECONDS
MUTE + 4 = 6 SECONDS
MUTE + 5 = 8 SECONDS
MUTE + 6 = 10 SECONDS
MUTE + 7 = 12 SECONDS
MUTE + 8 = 14 SECONDS
MUTE + 9 = 16 SECONDS

8. PRESS THE STAR BUTTON TO END THE MACRO RECORDING (NOT REQUIRED IF THE MACRO CONTAINS 10 BUTTON ENTRIES)
9. MUTE BUTTON FLASHES GREEN FOR 2 SECONDS & THE UNIT EXITS PROGRAM MODE

10. CLONING DATA BETWEEN CONTROLLERS

CLONING SAVES INSTALLATION SETUP TIME BY SENDING ALL PROGRAMMING DATA FROM ONE CONTROLLER TO OTHER CONTROLLERS IN THE SYSTEM

CAUTION: CLONING WILL OVERWRITE ALL PROGRAMMED DATA IN THE RECEIVING CONTROLERS

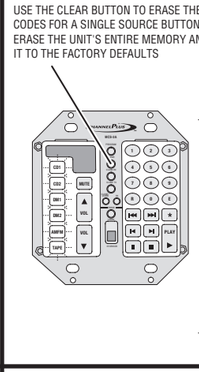


1. PRESS THE CLONE RX BUTTON ON ALL CONTROLLERS READY TO RECEIVE PROGRAMMING DATA FROM ANOTHER PROGRAMMED CONTROLLER. THE CLONE/LEARN INDICATOR WILL LIGHT AS THE UNIT WAITS FOR DATA FOR 10 MINUTES. PRESSING CLONE RX AGAIN EXITS CLONE MODE.
2. PUSH THE CLONE TX BUTTON ON THE PROGRAMMED CONTROLLER. THE CONTROLLER WILL BEGIN SENDING ITS PROGRAMMED DATA TO OTHER CONTROLLERS AND THE MUTE BUTTON WILL FLASH DURING THE TRANSFER
3. AFTER ALL DATA IS RECEIVED, THE OK INDICATOR LIGHTS
4. ONCE THE CLONING PROCESS IS COMPLETE, PRESS THE CLONE RX BUTTON TO EXIT CLONE MODE

11. ERASING SOURCE BUTTON MEMORY & CLEARING ALL MEMORY

USE THE CLEAR BUTTON TO ERASE THE INFRARED CODES FOR A SINGLE SOURCE BUTTON OR TO ERASE THE UNIT'S ENTIRE MEMORY AND RETURN IT TO THE FACTORY DEFAULTS

CAUTION: PUSHING THE CLEAR BUTTON FOR LONGER THAN 5 SECONDS WILL CLEAR THE UNIT'S ENTIRE MEMORY



ERASING A SINGLE SOURCE BUTTON'S PROGRAMMING

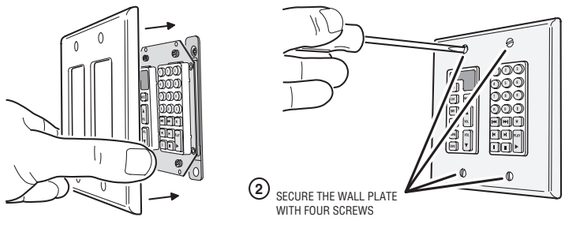
1. PRESS **AND RELEASE** THE CLEAR BUTTON
2. ALL SOURCE BUTTONS WILL BLINK YELLOW
3. PRESS THE SOURCE BUTTON TO ERASE
4. THE ERASED SOURCE BUTTON WILL FLASH RED THEN THE UNIT WILL RETURN TO NORMAL OPERATION

ERASING THE ENTIRE MEMORY

1. PUSH AND HOLD THE CLEAR BUTTON FOR **LONGER THAN 5 SECONDS**
2. ALL SOURCE BUTTONS WILL FLASH YELLOW THEN THE UNIT WILL RETURN TO NORMAL OPERATION

12. INSTALL THE WALL PLATE

1. INSTALL A DOUBLE-GANG DECORA™ WALL PLATE (NOT INCLUDED) TO COVER THE CONTROLLER AND THE INSTALLER SETUP BUTTONS



2. SECURE THE WALL PLATE WITH FOUR SCREWS

13. OPERATION

USING THE SOURCE BUTTONS

- Press any source button to turn the MDS-6A power on if it's off
- Press a source button to select the desired audio source for this controller's zone (the selected source button lights red)

CD1 CD2 DM1 DM2 AMFM TAPE

USING THE MUTE BUTTON

- Press MUTE to silence this controller's speaker zone (the MUTE button lights red)
- Press MUTE again to return this zone's speakers to their previous volume
- Push MUTE for 5 seconds to turn the MDS-6A power off

MUTE

USING THE WHOLE-HOUSE-MUSIC FEATURE

- Push a source button for 5 seconds to turn whole-house-music on or off
- The selected whole-house-music source button lights yellow
- The selected source will play through all system zones

CD1

USING THE VOLUME BUTTONS

- Press VOL-UP to increase the volume for this controller's speaker zone
- Press VOL-DOWN to decrease the volume for this controller's speaker zone

▲ VOL ▼

PLAYING MACROS

- Press the STAR button
- Within 2 seconds, press a button with a recorded macro.
- The recorded macro will play (the MUTE button flashes green during play)

★ + CD1

USING THE DO-NOT-DISTURB FEATURE

- Push and hold the VOL-DOWN button, then press the MUTE button to turn the do-not-disturb feature on or off (the MUTE button lights yellow when on)
- When do-not-disturb is on, the zone will **not** play whole-house-music or paging tones

VOL ▼ + MUTE

LIMITED WARRANTY

Linear LLC warrants this product to be free from defects in material and workmanship for 2 years. The time period will be measured using the date code labeled on the product. Linear LLC is not responsible for damage to the product resulting from the buyer's improper handling, stocking or warehousing of the product. Any implied warranty arising from the sale of the product including implied warranties of merchantability and fitness for purpose are limited. Linear LLC shall not be responsible for any losses, damages or expenses, whether direct, consequential, or incidental arising from the use or the inability to use the product. Some states and countries do not allow limitations or how long an implied warranty lasts or the exclusion or limitation or incidental or consequential damages, so the above exclusions may not apply. The Linear LLC warranty gives specific legal rights in addition to other rights, which may exist and vary from state to state and country to country.

The warranty is limited to repair or replacement of products returned, freight prepaid, to Linear LLC, there is NO PROVISION FOR LABOR COST OR OTHER REIMBURSEMENTS OF ANY KIND.

1. Failures due to product abuse, such as negligence, improper use, and electrical surge including damage from lightning, water damage or other damage due to natural disasters are not covered by the warranty. The most common form of product abuse is surge damage caused by lightning.
2. The warranty shall also be voided by any tampering with the date code, labels or other markings on the product.
3. Products that are damaged in transit to Linear LLC due to improper packaging or by the carrier (shipping company) will not be covered under the warranty. If the product was damaged or lost by the carrier, it is the sender's responsibility to create a claim against the carrier.
4. The user is responsible for all labor costs associated with removing, reinstalling and returning the product to Linear LLC.

Linear LLC, at its option, will repair or replace the defective product. Replacements will be made from B-Stock, if an exact replacement is not available, Linear LLC, at its option, will select the nearest equivalent product. The user is responsible for freight charges to Linear LLC. Linear LLC will return warranted repaired or replacements by UPS Ground or an equivalent service. A customer may pay the additional costs for second-day or next-day service.

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-999-5225 for an RPA# and other important details.

COMPACT DISC (CD) PLAYERS

MANUFACTURER	CODE NUMBER
Aiwa	090157
California Audio Labs	090029
Carver	090157, 090179
Classic	091297
DKK	090000
DMX Electronics	090157
Denon	090873
Emerson	090305
Fisher	090179
GPX	091296
Genexxa	090032, 090305
Harmon/Kardon	090157, 090173
Hitachi	090032
JVC	090072, 091294
Kenwood	090681, 090826, 090626, 090028, 090037
Koss	091317
Krell	090157
LXI	090305
Linn	090157
MCS	090029
Magnavox	090157, 090305
Marantz	090626, 090029, 090157
Miro	090000
Mission	090157
NSM	090157
Onkyo	090868
Optimus	091063, 090000, 090032, 090037, 090179, 090305
Panasonic	090029
Phillips	090626, 090157
Pioneer	091063, 091062, 090032, 090305
Polk Audio	090157
Proton	090157
QED	090157
Quasar	090029
RCA	091062, 090032, 090179, 090305
Realistic	090179
Rotel	090157
SAE	090157
Sansui	090157, 090305
Sanyo	090179
Scott	090305
Sears	090305
Sharp	090861, 090037
Sherwood	091067
Sonic Frontiers	090157
Sony	090490, 090000, 090100
TDK	091208
Technics	090029
Victor	090072
Wards	090157
Yamaha	090888, 091292

AUDIO/VIDEO (A/V) RECEIVERS

MANUFACTURER	CODE NUMBER
ADC	070531
Aiwa	071089, 071405, 070158, 071388
Alco	071390
Anam	071609
Apex Digital	071257
Audiotronic	071189
Audiovox	071390
Bose	071229
Capetronic	070531
Carver	071089, 071189
Denon	071104, 071160, 071360
JBL	071306
JVC	070074
KLH	071390
Kenwood	071313, 071027, 071570, 071569, 070027
Koss	071366
MCS	070039
Magnavox	071089, 071189, 070531
Marantz	071089, 071189, 070039
Musicmagic	071089
Onkyo	070135, 070842, 071298
Optimus	071023, 070531
Panasonic	071518, 070039, 071288
Philips	071089, 071189, 071269, 071283
Pioneer	071023, 070014, 070531
Proscan	071254
Quasar	070039
RCA	071023, 071254, 070531, 071390, 071609
Sansung	071295
Sansui	071089
Sherwood	071653
Sony	071058, 071258, 071158, 070158
Stereophonics	071023
Sunfire	071313
Technics	071308, 071309, 071518, 070039
Thorens	071189
Venturer	071390
Victor	070074
Wards	070014, 070158
Yamaha	070176, 071176

DIGITAL VIDEO DISC (DVD) PLAYERS

MANUFACTURER	CODE NUMBER
Aiwa	060641
Apex Digital	060672, 060755, 060794, 060795, 060796, 060797, 060830
Blue Parade	060571
Broksonic	060695
Deawoo	060784
Denon	060490, 060634
Emerson	060591
Enterprise	060591
Fisher	060670
GE	060522
Go Video	060715, 060783
Gradiente	060651
Harmon/Kardon	060582, 060702
Hitachi	060573, 060664
Hiteker	060672
JBL	060702
JVC	060558, 060623, 060867
Kenwood	060534, 060682
Konka	060711, 060719, 060720, 060721
Koss	060651
Lasonic	060798
Magnavox	060503, 060675
Malata	060782
Marantz	060539
Microsoft	060522
Mitsubishi	060521
Onkyo	060503, 060627
Oritron	060651
Panasonic	060490, 060632
Philips	060503, 060539, 060646, 060854
Pioneer	060525, 060571, 060632
Princeton	060674
Proscan	060522
RCA	060522, 060571, 060822, 061022
Rowa	060823
Sampo	060698
Samsung	060573, 060820
Sansui	060695
Sanyo	060670
Sharp	060630
Sherwood	060633
Sony	060533, 061533
Sylvania	060821
Technics	060490
Techwood	060692
Theta Digital	060571
Toshiba	060503, 060695, 061045
Urban Concepts	060503
Yamaha	060490, 060545,060817
Zenith	060503, 060591

SATELLITE (DBS) RECEIVERS

MANUFACTURER	CODE NUMBER
AlphaStar	030772
Chaparral	030216
Crossdigital	031109
Echostar	031105, 030775
Expressvu	030775
GE	030566
GOI	030775
General Instrument	030869
HTS	030775
Hitachi	030819
Hughes Network Systems	031142, 030749, 031749
JVC	030775
Magnavox	030724, 030722
Memorex	030724
Mitsubishi	030749
Motorola	030869
Next Level	030869
Panasonic	030247, 030701
Paysat	030724
Philips	031142, 030749, 030724, 031076, 030722, 031749
Proscan	030392
RCA	030392, 030566, 030855, 030143
RadioShack	030869
Samsung	031109
Sony	030639
Star Choice	030869
Toshiba	030749, 030790, 031749
Uniden	030724, 030722
Zenith	030856, 031856

MISCELLANEOUS AUDIO DEVICES

MANUFACTURER	CODE NUMBER
Aiwa	100010, 100159
Jerrold	100520, 100459
Scientific Atlanta	100460
Sony	100010, 100159
Starcom	100459

VIDEO CASSETTE RECORDERS (VCR)

MANUFACTURER	CODE NUMBER
Admiral	040048, 040209
Adventura	040000
Aiko	040278
Aiwa	040037, 040000
Akai	040041
American Action	040278
American High	040035
Asha	040240
Audiovox	040037
Beaumark	040240
Bell & Howell	040104
Broksonic	040184, 040121, 040209, 040002, 040479, 041479
CCE	040072, 040278
Calix	040037
Canon	040035
Carver	040081
Cineral	040278
Citizen	040037, 040278, 041278
Colt	040072
Craig	040037, 040047, 040240, 040072
Curtis Mathes	040060, 040035, 040162, 040041, 040760, 041035
Cybernex	040240
Daewoo	040045, 040278, 041278
Denon	040042
Dynatech	040000
Electrohome	040037
Electrophonic	040037
Emerex	040032
Emerson	040037, 040184, 040000, 040121, 040043, 040209, 040002, 040278, 040479, 041278, 041479
Fisher	040047, 040104
Fuji	040035
Funai	040000
GE	040060, 040035, 040048, 040240, 040760, 040807, 041035, 041060
Garrard	040000
Go Video	040432
GoldStar	040037, 040038, 041237
Gradiente	040000
Hi-Q	040047
Harley Davidson	040000
Harmon/Kardon	040081, 040038
Harwood	040072
Hitachi	040000, 040042, 040041
Hughes Network Systems	040042
JVC	040067, 040041
Jensen	040041
KEC	040037, 040278
KLH	040072
Kenwood	040067, 040041, 040038
Kodak	040035, 040037
LXI	040037
Lloyd's	040000
Logik	040072
MEI	040035
MGA	040240, 040043
MGN Technology	040240
MTC	040240, 040000
Magnasonic	040278, 041278
Magnavox	040035, 040039, 040081, 040000, 040149, 040563, 041781
Magnin	040240
Marantz	040035, 040081
Marta	040037
Matsushita	040035, 040162, 040454
Memorex	040035, 040162, 040037, 040048, 040039, 040047, 040240, 040000, 040104, 040209, 040454, 040479, 041037, 041162, 041237, 041262
Minolta	040042
Mitsubishi	040048, 040067, 040043, 040807
Motorola	040035, 040048
Multitech	040000, 040072
NEC	040104, 040067, 040041, 040038
Nikko	040037
Noblex	040240
Olympus	040035
Optimus	041062, 040162, 040037, 040048, 040104, 040432, 040454, 041048, 041162, 041262
Orion	040184, 040209, 040002, 040479, 041479
Panasonic	041062, 040035, 040162, 040225, 040454, 040616, 041035, 041162, 041262
Penney	040035, 040037, 040240, 040042, 040038, 041035, 041237
Pentax	040042
Philco	040035, 040209, 040479
Philips	040035, 040081, 040618, 041081, 041181
Pilot	040037
Pioneer	040067
Polk Audio	040081
Profitronic	040240
Proscan	040060, 040760, 041060
Protec	040072
Pulsar	040039
Quasar	040035, 040162, 040454, 041035, 041162
RCA	040060, 040035, 040048, 040240, 040042, 040149, 040760, 040807, 041035, 041060

VIDEO CASSETTE RECORDERS (CONT.)

MANUFACTURER	CODE NUMBER
RadioShack	040000,041037
Radix	040037
Randex	040037
Realistic	040035, 040037, 040048, 040047, 040000, 040104
ReplayTV	040614, 040616
Runco	040039
STS	040042
Samsung	040240, 040045
Sanky	040048, 040039
Sansui	040000, 040067, 040209, 040041, 040479, 041479
Sanyo	040047, 040240, 040104
Scott	040184, 040045, 040121, 040043
Sears	040035, 040037, 040047, 040000, 040042, 040104, 041237
Semp	040045
Sharp	040048, 040807, 040848
Shintom	040072
Shogun	040240
Singer	040072
Sonic Blue	040614
Sony	040035, 040032, 040000, 040636, 041032, 041232
Sylvania	040035, 040081, 040000, 040043, 041781
Symphonic	040000
TMK	040240
Tatung	040041
Teac	040000, 040041
Technics	040035, 040162
Teknika	040035, 040037, 040000
Thomas	040000
Tivo	040618, 040636
Toshiba	040045, 040043, 040845
Totevision	040037, 040240
Unitech	040240
Vector	040045
Vector Research	040038
Video Concepts	040045
Videomagic	040037
Videosonic	040240
Villain	040000
Wards	040060, 040035, 040048, 040047, 040081, 040240, 040000, 040042, 040072, 040149, 040760
White Westinghouse	040209, 040072, 040278, 041278
XR-1000	040035, 040000, 040072
Yamaha	040038
Zenith	040039, 040000, 040209, 040479, 041479

CABLE TELEVISION (CATV) BOXES

MANUFACTURER	CODE NUMBER
ABC	010003, 010008, 010014, 010017
Americast	010899
Bell & Howell	010014
Bell South	010899
Director	010476
General Instrument	010476, 010003, 010276, 010810
GoldStar	010144
Hamlin	010009, 010273
Jerrold	010476, 010003, 010276, 010012, 010014, 010810
Memorex	010000
Motorola	010476, 011106, 010276, 010810
Pace	010237
Panasonic	010000, 010107
Paragon	010000
Philips	010305, 010317
Pioneer	010877, 010144, 010533, 011877
Pulsar	010000
Quasar	010000
Regal	010273, 010279
Runco	010000
Samsung	010144
Scientific Atlanta	010877, 010008, 010017, 010477, 011877
Sony	011006
Starcom	010003
Supercable	010276
Tocom	010012
Torx	010003
Toshiba	010000
Zenith	010000, 010525, 010899

LASER DISK (LD)

MANUFACTURER	CODE NUMBER
Aiwa	050203
Denon	050059, 050172
Funai	050203
Mitsubishi	050059
NAD	050059
Optimus	050059
Panasonic	050204
Pioneer	050059
Quasar	050204
Relistic	050203
Sony	050193, 050201
Technics	050204

TELEVISION (TV) SETS

MANUFACTURER	CODE NUMBER
AOC	000030, 000019
Admiral	000093, 000463
Advent	000761
Aiko	000092
Aiwa	000701
Akai	000030
Alaron	000179
America Action	000180
Ampro	000751
Anam	000180
Apex Digital	000748, 000765, 000767
Audiovox	000451, 000180, 000092, 000623
Baysonic	000180
Belcor	000019
Bell & Howell	000154, 000016
Bradford	000180
Brockwood	000019
Broksonic	000236, 000463
CXC	000180
Candle	000030, 000056
Carnivale	000030
Carver	000054
Celebrity	000000
Changhong	000765
Cineral	000451, 000092
Citizen	000060, 000030, 000056, 000092
Concerto	000056
Contec	000180
Craig	000180
Crosley	000054
Crown	000180
Curtis Mathes	000047, 000054, 000154, 000051, 000451, 000093, 000060, 000030, 000145, 000056, 000016, 000166, 000466, 000702, 000747, 001147, 001347
Daewoo	000451, 000019, 000092, 000623
Daytron	000019
Denon	000145
Dumont	000017, 000019
Dwin	000720, 000774
Electroband	000000
Emerson	000154, 000236, 000463, 000180, 000178, 000019, 000179, 000623
Envision	000030
Fisher	000154
Fujitsu	000179, 000683
Funai	000180, 000179, 000171
Futuretech	000180
GE	000047, 000051, 000451, 000093, 000178, 000021, 000747, 001147, 001347
Gibralter	000017, 000030, 000019
GoldStar	000030, 000178, 000019, 000056
Gradiente	000053, 000056
Grunpy	000180, 000179
Hallmark	000178
Harley Davidson	000179
Harmon/Kardon	000054
Harvard	000180
Havermy	000093
Hitachi	000145, 000056, 000016
Infinity	000054
Inteq	000017
JBL	000054
JCB	000000
JVC	000053
KEC	000180
KTV	000180, 000030
Kenwood	000030, 000019
Konka	000628, 000632, 000638, 000703, 000707
LG	000056
LXI	000047, 000054, 000154, 000156, 000178, 000747
Logik	000016
Luxman	000056
MGA	000150, 000030, 000178, 000019
MTC	000060, 000030, 000019, 000056
Magnavox	000054, 000030, 000179, 001254, 001454
Majestic	000016
Marantz	000054, 000030
Matsushita	000250
Megatron	000178, 000145
Memorex	000154, 000250, 000463, 000150, 000178, 000179, 000056, 000016
Midland	000047, 000017, 000051, 000747
Minutz	000021
Mitsubishi	000093, 000150, 000178, 000019
Motorola	000093
Multitech	000180
NAD	000156, 000178, 000166
NEC	000030, 000019, 000056
NTC	000092
Nikko	000030, 000178, 000092
Onwa	000180
Optimus	000154, 000250, 000166
Optonica	000093
Orion	000236, 000463, 000179
Panasonic	000250, 000051

TELEVISION (TV) SETS (CONT.)

MANUFACTURER	CODE NUMBER
Penney	000047, 000156, 000051, 000060, 000030, 000178, 000021, 000019
Philco	000056, 000747, 001347
Philips	000054, 000463, 000030, 000145, 000019
Pilot	000030, 000019
Pioneer	000166, 000679
Portland	000019, 000092
Princeton	000717
Prism	000051
Proscan	000047, 000747
Proton	000178, 000466
Pulsar	000017, 000019
Quasar	000250, 000051
RCA	000047, 000051, 000093, 000019, 000090, 000679, 000747, 001047, 001147, 001247, 001347, 001447
RadioShack	000047, 000154, 000180, 000030, 000178, 000019, 000056, 000747
Realistic	000154, 000180, 000030, 000178, 000019, 000056
Runco	000017, 000030, 000603
SSS	000180, 000019
Sampo	000030
Samsung	000060, 000030, 000178, 000019, 000056, 000702, 000766
Sansei	000451
Sansui	000463
Sanyo	000154
Scimitsu	000019
Scotch	000178
Scott	000236, 000180, 000178, 000019, 000179
Sears	000047, 000054, 000154, 000156, 000178, 000179, 000056, 000171, 000747
Semivox	000180
Semp	000156
Sharp	000093, 000688, 000689
Shogun	000019
Signature	000016
Sony	000000, 001100
Soundesign	000180, 000178, 000179
Squareview	000171
Starlite	000180
Supreme	000000
Sylvania	000054, 000030, 000171
Symphonic	000180, 000171
TMK	000178, 000056
TNCi	000017
Tandy	000093
Technics	000250, 000051
Technol Ace	000179
Techwood	000051, 000056
Teknika	000054, 000180, 000150, 000060, 000019, 000179, 000056, 000016, 000092
Telefunken	000056, 000702
Toshiba	000154, 000156, 000060, 001256
Vector Research	000030
Victor	000053
Vidikron	000054
Vidtech	000178, 000019
Wards	000054, 000030, 000178, 000021, 000019, 000179, 000056, 000016
Waycon	000156
White Westinghouse	000463, 000623
Yamaha	000030, 000019, 000769
Zenith	000017, 000463, 000016, 000092

AUDIO AMPLIFIERS (AMP)

MANUFACTURER	CODE NUMBER
GE	080078
Harman/Kardon	080892
JVC	080331
Left Coast	080892
Marantz	080892
Optimus	080395
Phillips	080892
Polk Audio	080892
Realistic	080395
Soundesign	080078
Victor	080331
Wards	080078
Yamaha	080354

MISCELLANEOUS VIDEO DEVICES

MANUFACTURER	NUMBER
AOL	021061
Magnavox	021818
Mitsubishi	021002
Panasonic	021120
Philips	021818, 021061
Pioneer	021010
Princeton	020113, 020295
Samsung	021190, 021204
Sensory Science	021126
Sharp	021010
Sony	020850

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